DOCUMENT RESUME

ED 025 630 VT 007 118

By- Henry, Sarah T.

Questions and Answers on Programed Instruction.

Kentucky Univ., Lexington. Instructional Materials Lab.
Pub Date 68
Note- 24p.
EDRS Price MF-$0.25 HC-$1.30
Descriptors- *Annotated Bibliographies, Autoinstructional Methods, *Guidelines, High Schools, *Home Economics Education, *Programed Instruction, *Programed Materials, Resource Materials, Teacher Education

Materials for inservice and preservice teacher education were developed by home economics specialists for use by teachers and college students. The paper attempts to clarify some typical questions confronting teachers of all subject matter areas as they consider incorporating programed instruction in their classes. Using a question-answer format the paper conveys basic information such as: (1) Behavioral goals are expressed as desired outcomes. (2) Learning is continuously reinforced and is organized in a logical sequence. (3) Cornitive and psychomotor concepts are most applicable to programed instruction. (4) There are two basic types of program--constructed response and multiple choice. (5) Teaching machines, programed books, and computer assisted instruction are some of the forms of program instruction. (6) Subject matter specialists, trained in programing techniques, are considered to be most qualified to prepare program materials. (7) Programs have structured built-in evaluating devices, and (8) Research indicates there are no significant differences in retention by students of programed learning and those who learned by conventional methods. Suggested criteria for program material selection consider content, style, challenge, length, and cost. A chart of annotated home economics program instruction materials lists title, author-publisher, date, price, and other miscellaneous information. (FP)

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Questions and Answers on Programed Instruction

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Prepared by
Mrs. Sarah T. Henry, Home Economics Specialist
Instructional Materials Laboratory for Vocational Education
University of Kentucky, Lexington
1968

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MEMORANDUM

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Sarah T. Henry (Mrs.) (Agency) Instructional Materials Laboratory

(Address) Department of Vocational Education, University of Kentucky, Lexington, Ky.

DATE: August 29, 1968

RE: (Author, Title, Publisher, Date) Sarah T. Henry, Questions and Answers on Programed Instruction, Instructional Materials Lab., address above, 1968.

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(2) Means Used to Develop Material:
Development Group Individual authorship
Level of Group State (home economics specialist)
Method of Design, Testing, and Trial

(3) Utilization of Material:
Appropriate School Setting high school or college
Type of Program
Occupational Focus not occupationally oriented
Geographic Adaptability n/a
Uses of Material for in-service and preservice teacher education.
Users of Material Teachers and college students

(4) Requirements for Using Material:
Teacher Competency no requirements
Student Selection Criteria n/a

Time Allotment n/a

Supplemental Media --
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Desirable)

Describe n/a
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Introduction

In recent years we have heard and read much about Programed Instruction. Because of this publicity and emphasis on programed instruction (P.I.), teachers are naturally concerned with developments in this field and are raising many questions.

It would be helpful if teachers who desire to evaluate the Programed Instruction "movement" or "trend" were clear as to what is being said, what has been claimed for these materials, what their advantages and limitations are, and what they will and will not do for teachers and pupils.

The purpose of this paper is to clarify some typical questions which are confronting teachers as they consider incorporating programed instruction in their classes. Most of the questions and answers are of a general nature, and could be applied to any subject area. The programed materials which are listed and reviewed, however, are ones which seemed to the writer to have relevance to Vocational Home Economics programs.

This paper was prepared as a part of the course, Education 607, Programed Instruction, under the direction of Dr. Ollie E. Bissmeyer, at the University of Kentucky.

Appreciation is expressed to Dr. Bissmeyer for his help, to Dr. George L. Luster, Director, Instructional Materials Laboratory for editorial assistance, and to Tom Vantreese, Artist, Instructional Materials Laboratory for the cover design.

Questions and Answers

1. Q What is Programed Instruction:

   A Programed Instruction is a broad term which encompasses teaching materials which are based upon these principles:

   a. Small Steps

      Subject matter is presented in small steps, sometimes called frames, which are arranged in a logical order to accomplish the objective of the program. Steps are designed so that the learner can proceed independently and with a minimum of errors.

   b. Active Response

      To some stimulus (a question, statement, etc.) the learner makes an active response. He must actively participate in order to proceed with the program.

c. Immediate Confirmation

There is immediate knowledge of the results of the response. The student knows whether he is right or wrong. Since the steps are small and cues are given, the student normally has a high rate of correct answers.

d. Self Pacing

Each learner works through the program at his own rate.

e. Student Testing

Revision of the program is based on the results of student performance.

In summary, programing is a form of communication which attempts to get ideas transmitted from the programmer to the student.

* * *

2. Q What is the relationship between definite objectives and Programed Instruction?

A Programs to be effective must have a purpose and be designed to reach a goal. More and more, programs have these objectives stated in behavioral terms. Behavioral objectives make it evident what the student should be able to do upon completion of the program. These behavioral goals are expressed as desired outcomes. Some people feel there is a danger in basing a program of instruction on behavioral objectives due to the possibility of a resulting sterotyped behavior and a loss of individuality in outcomes. Nevertheless, any instruction, including P.I. should be based on sound objectives (behavioral or otherwise) in order to give direction to the learning process.

* * *

3. Q Upon what principles of learning is Programed Instruction based?

A Psychologists tell us that learning is enhanced by the learner's ability to respond correctly to small bits of information. Errors likewise have an adverse effect on learning. The learner's continued success in making correct answers rewards his efforts and he is encouraged to continue with the program. Learning is continuously reinforced throughout the program.

* * *

4. Q Isn't Programed Instruction one of our newer media for teaching?

A Yes and no. Actually, Sideny Pressey of Ohio State University is credited as being the pioneer of programed instruction with his teaching machine developed in 1926. Another developer is B. F. Skinner of Harvard University, who started his research on Programed

Instruction, in the 1950's. Recent interest in P. I. has been precipitated by an increased overall interest in quality education stemming from the launching of Sputnik in 1956, additional Federal funds for education, more educational and psychological research and the increased emphasis on technology in all phases of our lives. Part of the newness of P.I. comes in the emphasis on detail and preciseness. The way the learning is structured, however, is not new. Programed Instruction has brought about a revival of specificity in describing educational objectives and in breaking down information into small steps, organized in a logical sequence.

* * *

5. Q What types of concepts can be programed?

A In considering Bloom's Taxonomy of Educational Objectives, Fry* notes that all concepts included in the cognitive domain (i.e. knowledge, comprehension, application, synthesis and evaluation) appear to be teachable through programed instruction. Less appropriate to P.I. are concepts in the affective domain which includes less-tangible, subjective concepts dealing with attitudes, feelings, values, etc. According to Mills,* "a challenge facing Programed Instruction is--can it be used for complex concepts to change attitudes and appreciations, to develop ability to interpret and tap insightful behavior and creativity?" Concepts in the psychomotor domain, or manipulative skills, do have implications for P.I. Job training for particular manipulative skills, do have implications for P.I. Job training for particular manipulative skills is often well-suited to programing.

Someone has described these three domains as being the "Three H's--the "head" (cognitive), the "heart" (affective) and the "hands" (psychomotor). In summary, it seems that learning dealing with the "head" and the "hands" are most applicable to programed instruction.

* * *

6. Q What are some examples of ready-made Programed Instructional materials in these three categories?

A (Additional information on the sources and costs of these materials appears later in this paper.)

Cognitive--The programed material on Nutrition, by Igel and Calloway, contains factual information basic to the study of nutrition.

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*References are included in the last question at the end of this paper.

Affective--Of the materials examined by the author, the Coronet Learning Program entitled, Choosing Your Career, seemed to best fit this category. It deals with many of the intangible and attitudinal aspects of career choice.

Psychomotor--The Ginn Series of five programs entitled, Sewing Step by Step might be categorized as psychomotor. One program, "The Sewing Machine," takes the pupil through the steps of learning to use the sewing machine by following the printed material in using the machine and acconpanying teaching aids and calling on a teacher near by to lend assistance.

* * *

7. Q What are some types of programs?

A Most authorities agree that there are basically two types:

a. Constructed Response

This requires the pupil to write an answer or add the missing word as requested by the programmer. This type requires the user to recall information.

b. Multiple Choice

This calls for the pupil to select an answer from several alternatives, thus depending upon the user's ability to recognize the correct answer.

* * *

8. Q What is meant by the terms "linear" and "branching"?

A These are terms applied to techniques used in programing. In "linear" programing the material is arranged in an orderly sequence and the learner proceeds from the first item, or frame, to the last. When more than one sequence or route is arranged, the term "branching" is used. In this method, the route a pupil follows is determined by his answers. If he answers correctly, he may pass on to new information. If incorrect, he may repeat or review corrective material until he makes a correct response. Branching may take the form of a scrambled book in which a page number accompanies each possible answer. The user turns to the page which either tells him he correct or why he was wrong. Branching is quite applicable to computerized instruction in that several paths can be programmed into the computer.

* * *

9. Q What are some forms in which Programed Instruction is found?

A Teaching Machine - Usually refers to a program which is housed in some form of mechanical device. The advantage of machines over books in their control over cheating. Because of the many styles of machines and lack of uniformity in materials, they are expensive, when compared to books.

Programed Book - A special book in which the content to be learned has been arranged into a series of sequential steps leading from familiar concepts to new materials. The learner responds in the book or on a separate paper.

Computer Assisted Instruction - Utilization of a computer as a complex type of teaching machine. This has the advantage of a wide variety of multiple choice responses and branches being programed into the computer. The computer is often combined with a typewriter, slides, tape recordings and other media. The computer can maintain a complete record of items and responses and is extremely useful in research. They are extremely costly.

* * *

10. Q Who should prepare programed materials?

A Some authorities say that teachers should prepare these materials. Others say that psychologists or technicians especially trained in programing techniques should prepare them. Some say the writers should be subject matter specialists, while still others say it should be a team effort. There are obviously limitations for each group. In the case of activitely employed classroom teachers, the time required and the special skills needed to prepare materials are almost prohibitive. The role of the psychologist may be to train subject matter specialists in principles and techniques of programing. Team efforts have been somewhat successful. Perhaps the most successful group has been the subject matter specialists. They are usually persons with teaching experience who are highly competent in their field and who are trained in programing techniques. Any person who prepares these materials needs to be analytic, deductive and a methodical perfectionist.

* * *

11 Q How may teachers use programed materials?

A -To enrich school offerings. (For examples, the small school that cannot offer a wide range of subjects.)
-For practice or drill
-For review
-For remedial instruction
-For self-instruction for pupils who are homebound or the highly motivated student who can proceed independently

-To carry the burden in courses requiring logical, sequential instruction
-To supplement other teaching techniques
-To overcome individual differences in learning ability in the class

* * *

12. Q How does the teacher set the stage for using programed materials?

A -She is enthusiastic and creates interest among the pupils.
-She makes clear that the purpose of the program is for learning and not for testing.
-She makes sure that the pupils are ready for the program and that it meets their needs. She may pre-test.
-She provides a setting conducive to learning.
-She teaches the pupils how to use the programed material and the device involved.
-She observes for symptoms of boredom, fatigue, etc.
-She interprets the use of P.I. to parents and others.

* * *

13. Q How does Programed Instruction relate to other media and techniques for teaching?

A Programed materials are <u>among</u> the vast array of teaching materials. Teachers need to select from these materials the ones which will best help her students to achieve their potential in the course. The teacher's role is to match the needs of her pupils to suitable instructional materials and appropriate learning situations. Programed Instruction is only one type of instructional material.

* * *

14. Q Hoe does Programed Instruction differ from workbooks?

A Programed material attempts to present subject matter in more depth and in a more systematic way than workbooks. Programed material is self-contained, while workbooks usually supplement textbooks.

* * *

15. Q What are some advantages of Programed Instruction?

A -Programed Instruction teaches a <u>way</u> of learning.
-Programed materials are impartial elements.
-"Many a student who has found his efforts always tapped by a faster, more aggressive, more verbal student may find the self-pacing and successes of small, sequential steps offer a different

stimulus. His failures are made in private. His delays do not delay the class." (NEA)*

-"A teaching machine together with its learning program is a bridge that permits an expert teacher to reach countless students and serve each as a private tutor." (Finn and Perrin)*
-Programed materials permit the teacher to work with individuals. They enable her to deal with difficult parts of the subject, leaving repetitive parts to the program.
-Research studies indicate that both training time and teaching time can be materially reduced by P.I.
-P.I. provides immediate confirmation of a pupil's answer, therefore rewarding or reinforcing his work. This immediate reward for each individual is not possible in a traditional classroom situation.
-P. I. forces the user to make decisions.
-Students seem to enjoy teaching machines and programs, apparently because of the immediate knowledge of results and their high rate of accurate responses.
-Programed instruction helps to make a more exciting educational environment.

* * *

16. Q What are some limitations of Programed Instruction?

A -Programed materials do not contain the human element of emotion.
-Most programs contain few, if any alternatives. The learner responds in the way the programmer has it programed.
-P.I. removes some of the individuality of instruction. With P.I. you may limit student inquiry, sensitivity, and the interchange of ideas within the class and among pupils and teachers.
-The organization of material is usually done by someone else. The value of the teacher doing her own organizing is lost.
-Since there are no evaluation agencies for programed materials in our State, the selection is left completely to the teacher. She must rely upon her judgment and hope that the developers of programed materials are ethical and are providing authoritative information.
-It is conceivable that incorrect information can be built into a program.
-A pupil's success in using programed materials is largely determined by his reading ability. Self-pacing is, however, a desirable feature for the slow reader.

* * *

17. Q How can the teacher evaluate the effectiveness of Programed Instruction?

*References are included in the last question at the end of this paper.

A Programs have structured built-in evaluative devices during or at the end of the program. It is important to provide delayed testing to help determine the retention of learning. Some may feel that learning from P.I. is not as effective as with traditional methods. According to Fry, the research indicates that there are no significant differences in retention by students of programed learning and those who learn by conventional methods.

* * *

18. Q If the answers are readily accessible to the students, doesn't this promote cheating?

A It is very easy for pupils to look ahead for answers in printed programs. Pupils need to understand that the program is not a test. Mastery of information at each step is essential if a pupil is to achieve the goals of the program. Most teaching machines have "licked" the cheating problem by having devices (as glass windows) to cover the pupil's answer as the pupil moves to the correct answers.

* * *

19. Q What should a teacher consider in selecting Programed materials?

A It is important that a teacher work through the programs and try them out with several pupils. This will help the teacher to evaluate the relevance of the material to her pupils and classes. The following criteria may help a teacher evaluate programed materials:

<u>Content</u>

-Is information accurate?
-Is it appropriate to the unit objectives?

<u>Style</u>

-Is it appealing to the students?
-Will it hold their interest?

<u>Challenge</u>

-Does the program move too slowly for the individual(s) to be reached?
-Does it move too rapidly?

<u>Length</u>

-Does the program have suitable stopping points?
-Is the length appropriate for the individuals being reached?

Cost

-Is the cost equal to the value to be received?
-Can programs be re-used?
-If machines are needed, are they available?
-If purchase of hardware (machines, etc.) is necessary, can they be used with other programs and by other teachers?

The final criterion of a good program is its success in actual teaching situations.

* * *

20. Q What programed materials are available for home economics instruction?

How appropriate are these for home economics programs in Kentucky?

A Otto and Vantrease in a recent issue of Focus* voiced a concern for the lack of programed materials in home economics. This is quite true. The programed materials located by the writer were few in number and of these a large proportion was of questionable use in exisiting programs. Few were prepared by a consultation with Home Economics subject-matter specialists. Therefore, if programed instruction is to be fully used in home economics, much effort is needed to improve the quality and quantity of these materials.

Many of the following programed materials were listed in Programed Learning: A Bibliography of Programs and Presentation Devices by Carl Hendershot. It is interesting to note that only one title, "Interior Decoration," was listed in the Home Economics category. Other titles were found by scanning other parts of the bibliography. Some materials were available for review while other descriptions were based on information in the bibliography and from other sources.

The list begins on the following page.

*References are included in the last question at the end of this paper.

PROGRAMED INSTRUCTIONAL MATERIALS RELATING TO
VOCATIONAL HOME ECONOMICS INSTRUCTION

Title	Author and/or Publisher	Date	Price	Other Information
Baby Care	Sidney Q. Cohlan, M.D. for Johnson and Johnson, Instructional Materials Laboratory, 18 East 41st Street, New York, New York, 10017	1966	$12/classroom unit for 30 pupils	Has student tests and instructor's manual Average completion time: 183 minutes

Description: (Reviewed) A group of Pennsylvania teachers in giving this material a "trial run" found it particularly stimulating to slower students and useful in promoting class discussions. This program may be applicable to: (1) Child care unit in Home Economics IV of the Kentucky Curriculum Guide, (2) semester-long special interest course in Child Development, (3) Occupational Training programs in child care-related occupations and (4) adult homemaking programs. It seems most appropriate for new or prospective mothers. The content seems thorough and includes the significant phases of infant care.

Basic Patient Care: A Programed Instruction in Nursing Fundamentals	W. B. Saunders Company, West Washington Square Philadelphia, Pa. 19105		$3.75

Description: (Not reviewed) If not too technical, it might be used in Home Nursing units for high school or adult homemaking classes. Some phases may be useful in occupational training programs such as for Hospital Housekeeping Aides.

Child Management: A Program for Parents	By Smith and Smith, Ann Arbor Publishers, 610 Forest, Ann Arbor, Mich.		$2.50 paper $4.00 hard cover

Description: (Not reviewed) Although not examined by the author, the title suggests use for parent-education programs or adult education classes.

Title	Author and/or Publisher	Date	Price	Other Information
Applying for A Job	By P. Rath, R. Mason and L. Phipps, Interstate Printers & Publishers, Danville Illinois 61832		$2.50	
Description:	(Not reviewed) Includes a self-study guide for students including a "Job Application Game." Seems suitable for occupational training classes.			
Choosing Your Career	Coronet Learning Programs, Coronet Educational Films, 65 East South Water Street, Chicago, Illinois 60601		$1.50	307 frames, requires approximately four hours
Description:	(Reviewed) This program seems appropriate for high-school guidance programs and for introducing career units in various subjects, including home economics. It might be useful in orientation for home economics occupational training. Much of the information deals with values rather than facts. This material would be very helpful to stimulate the pupil's thinking about himself and his career potentialities. An overview of the world of work with a look at job classifications is included.			
Color and the Color Wheel	Corregon Association, Videosonic Systems, Div. Unitutor Texts, Hughes Aircraft Company, P.O. Box 3310, Fullerton, California 92634		$1.00	95 frames
Description:	(Not reviewed) Includes primary, secondary and intermediate colors and how to construct a color wheel. It appears to have application to clothing and housing units at the high school or adult levels.			
Consumer Mathematics Series	By D. Knowles, Behavioral Reserach Laboratory, Ladera Professional Center, Box 577 Palo Alto, California 94300		$2.96 each	

Title	Author and/or Publisher	Date	Price	Other Information

Titles:
1) Vocational Opportunities and Lifetime Earnings
2) The Pay Check
3) The Household Budget
4) The Wise Buyer

Description: (Not reviewed) The mathematics of financing everyday living and vocational planning. Titles 1-4 seem applicable to high school and adult homemaking. Titles 1 and 2 seem applicable to occupational training.

First Aid	B. Haller Igel, Behavioral Laboratory (address before)	1965	$2.76-program .48¢ test book .48¢ teacher's manual	

Description: (Reviewed) This first aid program goes into more detail and into more phases of first aid than in the usual home economics class. The teacher might, however, select certain topics from the table of contents and assign only those groups of frames which are applicable to the unit being studied. The student with a special interest in first aid or the accelerated student could be encouraged to work the entire program. First aid techniques are well illustrated and it seems that a person could perform the tasks by reading and following instructions in the text. This program is said to be suitable for junior high, high school or adult levels.

Food Borne Disease Investigation: Analysis of Field Data, A Self-Instructional Lesson	U. S. Department of Health, Education, and Welfare, Public Health Service, available from Supt. of Documents, Washington, D. C.	1964	.40¢	Requires 1½ to 2½ hours to complete

Title	Author and/or Publisher	Date	Price	Other Information
Description:	(Reviewed) This program explains and gives examples of the causes of food-borne disease. It would be valuable background information for teachers of any foods program. It would be helpful for trainees in food service programs especially at the adult level.			
Fundamentals of Nutrition (1)	By Jensen, Moses, Poindexter, and Sierra-Franco, Educational Systems Development, 31270 Stevenson Highway, P. O. Box 457, Royal Oak, Michigan 48068		$2.00	Includes elements, carbohydrates, proteins, fats
Fundamentals of Nutrition II	By Jensen, Moses, Poindexter, and Sierra-Franco Educational Systems Development, 31270 Stevenson Highway, P. O. Box 457, Royal Oak, Michigan 48068		$2.00	Includes vitamins, minerals, digestion, diets, cultural factors
Description:	These are recommended for community college, nursing and similar levels. They might also be used in post-high school food-service programs, adult homemaking programs and by teachers desiring refresher work in nutrition.			
Glamour Genie	By Beverly Kane, Educational Aids Publishing Corporation for Parker Publishing Company, West New York, New York	1964	$5.95	This "programed learner" is a simple form of teaching machine. It is contained in a cardboard box. The program is printed on a continuous roll of paper. One window exposes the statement. Another has space for the student's answer. The correct answer appears on the next frame.

Title	Author and/or Publisher	Date	Price	Other Information
Description:	(Reviewed) The cost of the program seems excessive for the quality of content. The content is "glamour" oriented rather than "grooming" oriented. It might be useful to adults or post-high school students who are mature enough to evaluate opinions. Many value judgments are made. This program would be affected by changes in styles and standards of "beauty and charm."			
Hotel and Restaurant Employees Training	Visual Programing, Inc., 315 Central Park West, New York, New York 10025			About 20 programs in preparation. Model 700B Teaching Machine required. Cost of machine is $80, uses film-strips packed in cartridges.
Description:	(Not reviewed) Seems appropriate for food service occupational training.			
Home Nursing Programed Instruction	The American Red Cross 17th and D. Street N.W. Washington, D. C. 20006	1966		
Description:	(Not reviewed) The student's manual may be used with or without an instructor present. The course includes those phases of the home nursing course that lend themselves to a programed format. Although primarily intended for high school students, it may be adapted to any age group.			
How to be More Creative	By L. Whisler, Central Scientific Company, 1700 Irving Park Road, Chicago, Illinois 60613	1965	$1.65	
Description:	(Reviewed) This program is designed for "alert teen-agers and adults, for persons of all ages who want to be more creative in their thinking and action." This program would be usable for general self-improvement. It does not appear to have specific relevance to areas of home economics.			

Title	Author and/or Publisher	Date	Price	Other Information
How to Conduct Meetings: A Programed Instruction Manual on Parliamentary Procedure	By Wiksell, Harper and Rowe Publsihing, Inc. 49 East 33rd Street, New York, New York 10011		$2.50	Requires approximately 6 hours
Description:	(Not reviewed) This program seems appropriate for high-school students and adults involved in organizational work. It might be used by individuals or groups to develop skills in parliamentary procedure. Specific application to home economics programs would be for training officers in the Future Homemakers of America organization. Other programed materials on parliamentary procedure are listed in Hendershot's bibliography, mentioned before.			
Improving Communications in Marriage	General Relationships Improvement Program, Human Development Institute, 1299 West Peachtree St., N.E. Atlanta, Georgia 30309		$14.50	
Description:	(Reviewed) Involves interaction of two participants in conversation, role-playing, directed and non-directed discussion. This material is oriented to facilitate change in one's relationship with others. It is suggested for college or adult use.			
Interior Decoration	General Programed Teaching Corporation, Encyclopedia Brittanica Press, 420 North Michigan Avenue, Chicago, Illinois 60611		$3.00	Requires approximately 19 hours
Description:	(Not reviewed) Recommended for high-school pupils or adults. Includes the application of basic principles of interior decoration.			

Title	Author and/or Publisher	Date	Price	Other Information
Nutrition	Igel and Callaway, Behavioral Research Laboratory. (address before)	1964	$2.82 text .53¢ test book .77¢ manual	
Description:	(Reviewed) This programed text includes a general survey of nutrition, diet, digestion and food safety. It includes more detail than is usually included in a food and nutrition unit in high-school home economics. There are five sections, somewhat independent of each other. A teacher could select topics from the table of contents and have pupils complete those which apply to their study. This program might be used in its entirety in a semester special-interest food management course, in an adult class, for use with accelerated pupils, for make-up work or as background information for the teacher. A teacher's manual and text booklets are available.			
Nutrition	Central Scientific (address before)		$2.95	This program is contained in a programed learner similar to the one described under the title, "Glamour Genie."
Description:	(Reviewed) This program includes nutrition in plants and nutrition and digestion in man. It seems too technical for general home economics. It seems more appropriate for science courses, such as biology. It might be used for self-improvement by the home economics teacher, or by the accelerated student.			
Primer on Manners (Gaining Social Confidence)	By Warren Honor Products 22 Moulton, Stree, Cambridge, Massachusetts 02138		$2.50	Honor Products Teaching Machine costing $25 required. This is a battery powered, push-button operated for programs made only by this company.
Description:	(Not reviewed) Suggested for junior high school level.			

Title	Author and/or Publisher	Date	Price	Other Information
Programed Slide Series including, 35 mm. slides, script and quiz	Dr. Stephan Konz Industrial Engineering and Mrs. Raymona Middleton Institutional Management Food Service Industry Work Instruction Program Kansas State University Manhattan, Kansas 66502		$7.00 ea.	

Titles include:

Dipped Salad Assembly
Cleaning a Meat Slicer
Making Salad Sandwiches
Making Change
Breading Foods for Deep Fat Frying
Frosting a Cake
Portioning a Pudding
Cutting a Pie
Weighing Ingredients
Panning Rolls
Preparation for Operation of a Dishwasher
Serving Dinner, Rolls and Coffee
Setting a Table
Setting a Banquet Table
Clearing a Table
Making Sliced Meat Sandwiches

Description: (Some Reviewed) These slides show step-by-step procedures for performing certain tasks in quantity food preparation. They may be useful in occupational training programs for food service.

Safety	By LeRoy Balden, Jr., Behavioral Research Lab., (address before)	1964	$4.12	

Title	Author and/or Publisher	Date	Price	Other Information

Description: (Reviewed) Several aspects of this program apply to various phases of home economics. For example, it includes home accidents, safety precautions involving food, and safety for small children. The teacher could select the frames for the desired topics from the table of contents. Topics such as "Safety in Hunting" and "Competitive Sports" may be omitted. The review sections that include the complete program would have to be adjusted if the teacher used sections.

<u>Sewing Step by Step</u> 5 Programs: "The Sewing Machine," "Understanding and Using Patterns," parts 1 and 2 and "Construction Techniques," parts 1 and 2	By Johnson, Clawson and Shoffner Ginn and Company, Boston, Mass. 02117	1967	(set of 5 programed books) $9.28 (File box of panels and materials to assemble panels) $52.00 25 Measurement charts 92¢ 25 Cutting charts 92¢ 10 Student test booklets $3.96 Teacher's Manual $1.52	

Description: (Reviewed) This material was prepared by three professors from the University of North Carolina, Greensboro. It was developed and tested in a number of schools under a research grant from the U.S. Office of Education. It is designed for beginning clothing construction at the junior or senior high school level.

Title	Author and/or Publisher	Date	Price	Other Information
	Accompanying the pupil program books is a set of panels which are the basis for illustrations, fabric samples, etc. to be assembled by the teacher. Instructions for completing the samples are included. It appears that it would take much of the teacher's time to prepare the samples. Once they were completed, however, she could use them repeatedly. She would want to be sure that the techniques illustrated were acceptable to her. The teacher's time in class would be used in helping individuals as they worked through the program at their own rate. The program calls for pupils to work certain answers on paper, go to the sewing machine to perform tasks, go the pressing center, call to the teacher, consult the sample panels, etc. This is a unique way to allow for more individual attention. There seem to be several limitations to using this material. For example, information and style in clothing construction will become dated. Also, the recent changes in uniform pattern sizing make some of the panels out-of-date. It seems that much of this material is too specific to meet the needs of a wide range of teachers, programs and schools.			
Training Yourself for Food Service	Restaurant Hotel Aids, Inc., Loring Building 1409 Willow Street Minneapolis, Minn. 55403		$2.00	
Description:	(Reviewed) This programed booklet has been used in some high school food service occupational training programs. Teachers have found it helpful for individual pupil study. Booklets can be re-used if pupils do not write in them.			
Understanding Cooking	D. Landberg and L. Kotschevar, The University Store Amberst, Mass.	1965	$5.00	
Description:	(Not reviewed) This program seem appropriate to special interest foods classes, occupational training and perhaps others. It covers basic information about food preparation.			
Turner Livingston Reading Series	Follett Publishing Company 1010 West Washington Blvd. Chicago, Illinois 60607		.78¢ each .78¢ teacher's manual	

Title	Author and/or Publisher	Date	Price	Other Information
Titles: The Money You Spend, The Town You Live In, The Jobs you Get, The Person You Are, The Friends You Make, The Family You Belong To				
Description:	(Not reviewed) These are written at the 4th through 6th grade reading levels. They are aimed toward the culturally deprived adolescent. They might be used with individuals in regular classes or in classes for persons with special needs. Some titles may be useful for occupational training programs.			
Your Study Skills	Coronet (address before)		$1.50	
Description:	(Not reviewed) Thsi program is recommended for the 7th through 9th grades. It could be used in orientation, relationships or management units. It could be used in classes or by individuals at the junior high level or above.			

21. Q Are there some programed materials of special interest to teachers?

A Yes. Some examples are:

- Milton, Ohmer, and West, Leonard J. P. I., Programed Instruction--What It Is and How It Works. Harcourt, Brace and World, Inc., 1961, 30 pp.

This is a programed booklet on the principles of programed instruction.

- Sanders, Norris M. Classroom Questions What Kinds? New York: Harper and Row, 1966, 176 pp.

This book concerns a taxonomy of classroom questions. It would be very helpful to the teacher who desires to ask more meaningful questions in the classroom and on evaluation devices. This book is programed to the extent that questions are asked at the end of each chapter followed by the answers. The reader is encouraged to apply certain aspects of the book to a unit of instruction.

- Mager, Robert F. Preparing Instructional Objectives. Palo Alto, California: Robert F. Fearon Publishers, Inc. 2615 Park Boulevard, 94306, $1.75

This book utilizes the branching method in presenting criteria for stating behavioral objectives, or objectives which state the desired behavior which pupils will be able to demonstrate when he completes the step in the learning process.

- Granberg, Grace. Planning for Occupational Programs in Home Economics. Seattle, Washington 98105: School of Home Economics, University of Washington, 1967, $30.

This is an "audiotutorial kit" consisting of ten tapes which are designed for home economics teacher education programs. The ten taped lessons are organized so students may program themselves through the series by listening and reacting to one tape at a time, progressing at their own speed. Reactor sheets are provided. According to Granberg, the purpose of these tapes are, "to help students better understand this purpose of Home Economics Education which is to prepare secondary and post-secondary students for occupations that use the knowledge and skills of Home Economics."

- Nelson, Helen Y., Development of Programed Instruction for Home Economics Education and Study of Attitudes Toward Its Use at the Undergraduate Level, Ithaco, New York: Department of Home Economics Education, New York State College of Home Economics of Cornell University, 1966.

This is a report of a study in which eight programs were developed and tested for possible use in home economics teacher education. The report and the eight programs are available at cost (not listed) from Cornell. The program titles follow:

1. Business of the Secondary School Home Economics Department
2. Future Homemakers of America
3. Guiding the Home and Community Experience Program
4. Management of the Secondary School Home Economics Department
5. Planning the Secondary School Home Economics Department
6. Professionalism: The Teacher and Her Profession
7. The School Lunch Program
8. Values and Home Economics Education

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22. Q What references were used in preparing the answers to these questions?

A 1. Decocco, John P., Ed. Educational Technology, New York: Holt, Rinehart and Winston, 1964.

2. Finn, James D. and Perrin, Donald G. Teaching Machines and Programed Learning--A Survey of the Industry, U.S. Department of Health, Education and Welfare, Office of Education, Washington: Supt. of Documents, 1962.

3. Fry, Edward B. Teaching Machines and Programed Instruction, New York: McGraw-Hill Book Company, Inc. 1963.

4. Hendershot, Carl H. Programed Learning: A Bibliography of Programs and Presentation Devices. Bay City, Mich.: the author, 414 Ridgewood Drive, 48707, 1967.

5. Mills, Annice L. Programed Learning and the Educational Process, New York: Thomas A. Edison Foundation, 8th W. 40th Street, 1961.

6. Milton, Ohmer and West, Leonard J. Programed Instruction--What It Is and How It Works. New York: Harcourt, Brace and World, Inc. 1961.

7. National Education Association, Selection and Use of Programed Materials. Washington: The Association, 1201, Sixteenth Street, 20036, 1964.

8. Vantrease, Judy and Otto, Arlene. "Programed Instruction: Its Possibilities for Home Economics," John Wiley & Sons, Inc., 605 Third Avenue, New York, New York 10016.